

PII.16 Innovative Rotary Crossflow System for Volume Reduction of Mixed Hazardous and Radioactive Waste

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Abstract

The Spintek II High Shear Rotary Membrane Filtration System is a unique compact crossflow membrane system that has large, demonstrable advantages in performance and cost compared to currently available systems:

High fluid shear prevents membrane fouling even with very high solids content; hazardous and radioactive components can be concentrated to the consistency of a pasty slurry without fouling.

Induced turbulence and shear across the membrane increases membrane flux by a factor of ten over existing systems and allows operation on fluids not otherwise treatable.

Innovative ceramic membrane and mechanical sealing technology eliminates compatibility problems with aggressive DOE waste streams.

System design allows rapid, simple disassembly for inspection or complete decontamination.

Produces colloidal- and suspended-solids-free filtrate without the addition of chemicals.